



**UNITED STATES DEPARTMENT OF COMMERCE  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
087520, 079	08/28/95	YAMAZAKI	S

MM21/0505  
SIXBEY FRIEDMAN LEEDOM AND FERGUSON  
8180 GREENSBORO DRIVE  
SUITE 800  
MCLEAN VA 22102

EXAMINER  
JACKSON JR, J

ART UNIT PAPER NUMBER  
2815

DATE MAILED: 05/05/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

520079

Applicant(s)

Yamazaki

Examiner

JG

Group Art Unit

2815

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Priority Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on 3/4/99
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 73-134 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 73-134 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 25
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 73-134 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang '733 or '360 or '426 in view of Yamazaki '636.

Zhang in each reference teaches a recrystallized thin film transistor in which the crystal grain boundaries are much larger than the length of the channel regions. From Yamazaki it would have been obvious to have practiced carbon, nitrogen, and oxygen impurities at a concentration below  $5 \times 10^{18}/\text{cm}$  to improve the carrier lifetimes. Recitations of spin densities, etc are considered inherent properties possessed by the prior art applied. No claims are allowable.

3. Applicant's arguments filed 4 March 1999 have been fully considered but they are not persuasive. Applicant's reference to figure 7 of his specification shows that the present invention and Zhang have the same structure. The size of the monodomains are considered to be much larger than channel regions. Thus claiming channel regions in monodomains it is not considered patentable in view of Zhang. The other Zhang articles likewise teach large crystalline monodomains where channel regions are formed. Applicant's argument concerning the "S" value is not convincing unless applicant can positively prove the prior art does not possess the same property.

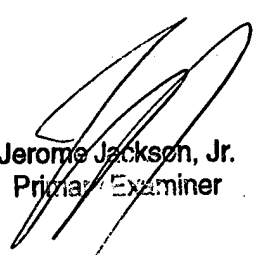
  
Jerome Jackson, Jr.  
Primary Examiner

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4. Claims 123, 129 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation "S" value is vague and indefinite.

Any inquiry concerning this communication should be directed to Jerome Jackson at telephone number (703) 308-4937 or the receptionist at 308-0956.



Jerome Jackson, Jr.  
Principal Examiner